

Ser. No. 10/737,053
Art Unit 3746

2

Please amend the claims as follows:

Claims 1-11 (CANCELED)

12. (AMENDED) A method for the generation of mechanical and electrical power comprising the steps of:

- a. introducing a driving fluid at ambient pressure ~~in~~ and temperature to a positive displacement axial vane rotary compressor to compress said driving fluid;
- b. compressing said driving fluid;
- c. preheating said compressed driving fluid;
- d. heating said preheated compressed driving fluid to a temperature of between about 1800° F. to about 2600° F.;
- f. introducing said compressed and heated driving fluid to an axial vane rotary expander whereby the expansion of said driving fluid in said expander is translated to rotation for driving an output shaft.

13. (CANCELLED) The method of claim 12 whereby rotation of said axial vane rotary expander produces rotation of said positive displacement axial vane compressor by a common shaft linking said expander and said compressor.

14. (AMENDED) The method of claim 12 wherein said compressed and heated driving fluid is selected from the group consisting of air, propane, methane, butane, carbon dioxide, natural gas, landfill gas and mixtures thereof.

AD027:000AD:474400:1:1 LOUISVILLE

Ser. No. 10/737,053
Art Unit 3746

3

15. (AMENDED) The method of claim 12 further including the step of recovering said heated ~~drive~~ driving fluid from said axial vane rotary expander and passing it through a heat exchanger to recover heat energy therefrom.

16. (ORIGINAL) The method of claim 18 further including the step of passing said compressed driving fluid through said heat exchanger thereby to preheat said driving fluid prior to heating it for introduction to said expander.

17. (CANCELLED) The method of claim 15 further including the step of passing said compressed driving fluid through said heat exchanger thereby to preheat said driving fluid prior to heating it for introduction to said expander.

18. (NEW) A microturbine system for the generation of electrical and mechanical power, said microturbine system including a positive displacement axial vane compressor and a positive displacement axial vane expander, said expander including at least one inlet port for the introduction of a driving fluid to said expander and a combustor for each said inlet port..

19. (NEW) The microturbine system of claim 18 wherein said expander includes four said inlet ports and a combustor for each of said inlet ports.

AD027:000AD:474400:1:LOUISVILLE